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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,330	12/30/2003	Thomas J. Good	10455-1US	4637

7590 11/15/2007

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EXAMINER	
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ART UNIT	PAPER NUMBER
1797	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/088,330	GOOD ET AL.	
	Examiner	Art Unit	
	John Kim	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,11-17,19,21-25 and 27-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12-17,19 and 22-24* is/are allowed.

6)☒ Claim(s) *1-5,11,21,25,27,29-34 and 39-41* is/are rejected.

7)☒ Claim(s) *6-8,19,28 and 35-38* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-5, 11, 21, 25 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper et al (US Pat. No. 5,391,298) in view of Mehl (US Pat. No. 4,774,058) and Markell et al (US Pat. No. 5,279,742). Pieper et al teach an apparatus for extracting a substance from a liquid sample comprising a container(18) having an entrance (25, 50), an exit (32, 36), a sidewall (20) and a bottom wall (22) are of a unitary construction wherein the bottom wall (22) has a side wall partially shown in the second half of the housing (18) and a passage therebetween wherein the exit (36) is substantially centrally located in the bottom wall (22) of the container (18) being substantially perpendicular to a flow path between the entrance (25, 50) and the exit (32, 36), within the passage, a thin layer of microparticulate extraction media (40) of silica wherein the extraction media layer (40) has a top surface, a bottom surface and a peripheral edge in contact with the sidewall, the extraction media has a particle size of 0.1 to about 600 microns (see col. 4,

lines 57-60), a thin layer of microparticulate extraction media disk (40) having a diameter of 47 mm and a thickness of 0.5 mm (see col. 6, lines 23-25) which meets the claimed ratio of the diameter of the extraction media layer to the thickness of the extraction media layer being at least 10 and the extraction media disk (40) being sandwiched between two cylindrical porous sheets (42, 44) i.e. compression layers and a lower mesh flow distributor (38) below the lower porous sheet (44) (see figures 2-3; col. 4, line 7 – col. 6, line 27; col. 7, line 51 – col. 8, line 24; col. 1, lines 10-28). Claims 1-5, 11, 21, 25 and 41 essentially differ from apparatus of Piper et al in reciting that the bottom wall of the container having a flat internal surface, the compression layers being formed of a flexible, hydrophilic microfiber material and the extraction media has a particle size of less than 20 microns. Piper et al shows a container having a conical bottom wall in figures 2-3. Such conical bottom wall inherently enhances the fluid flow out to the exit by sheer downwardly inclined wall toward the exit. Piper et al teach that a restriction of fluid flow through the housing allow a liquid layer to build up in the housing which completely immerses the extraction medium (see col. 2, lines 43-59). Changing the configuration of the bottom wall of the container from a conical shape to a flat surface would have been a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed bottom wall of the container was significant. See In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Furthermore, it's examiner's position that a person of ordinary skill in the art would have known that the changing the configuration of the bottom wall of the container from a conical shape to a flat surface would effectively restricting the fluid flow in the container to build up liquid layer in the housing to immerse the extraction medium since flat surface is in full contact with extraction media while conical shape would not

have been in full contact with extraction media to further restrict the flow. Mehl teaches a filter for separating fluid samples comprising a container (12), a thin extraction media of particles (42) made of silica which are retained by upper and lower compression layers (36, 38) made of glass fibers which inherently have a pore size less than the particle of the extraction media to retain particles (see figures 1-7; col. 2, lines 9-16; col. 3, lines 37-47; col. 4, line 61 – col. 5, line 55). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the porous sheets of Piper et al with compression layers made of glass fibers i.e. flexible, hydrophilic microfiber materials for retaining extraction media layer as suggested by Mehl (see col. 5, lines 43-55). Markell et al teach an extraction media disk comprising particles having a size less than 20 microns (see col. 8, line 27 – col. 10, line 11). Incorporating particles having a size less than 20 microns in the extraction media of Piper et al would have been obvious at the time the invention was made since such particles are known to be used for extraction process as taught in Markell et al.

3. Claims 27, 29-33 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper et al (US Pat. No. 5,391,298). Pieper et al teach method and an apparatus for extracting a substance from a liquid sample comprising a container having a top (20) with an inlet (25, 50) and a bottom (22) having a centrally located outlet (32, 36) and a substantially flat inner wall, a sidewall (20) and a bottom (22) are of a unitary construction wherein the bottom (22) has a side wall partially shown in the second half of the housing (18) and the container (20, 22) having a thin layer of microparticulate extraction media disk (40) having a diameter of 47 mm and a thickness of 0.5 mm which meets the claimed ratio of the diameter of the extraction media layer to the thickness of the extraction media layer being at least 10 and the extraction

media disk (40) being sandwiched between two cylindrical porous sheets (42, 44) i.e. compression layers and a lower mesh flow distributor (38) below the lower porous sheet (44) wherein a liquid sample is passed through the container into the entrance (28) for transverse flow through the extraction media (40) and out the exit (32, 36) to extract analyte from the liquid sample by the extraction media (see figures (see figures 2-3; col. 4, line 7 – col. 6, line 27; col. 7, line 51 – col. 8, line 24; col. 1, lines 10-28). Claims 27, 29-33 and 39-40 essentially differ from method and apparatus of Piper et al in reciting that the bottom wall of the container having a flat internal surface. Piper et al shows a container having a conical bottom wall in figures 2-3. Such conical bottom wall inherently enhances the fluid flow out to the exit by sheer downwardly inclined wall toward the exit. Piper et al teach that a restriction of fluid flow through the housing allow a liquid layer to build up in the housing which completely immerses the extraction medium (see col. 2, lines 43-59). Changing the configuration of the bottom wall of the container from a conical shape to a flat surface would have been a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed bottom wall of the container was significant. See In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Furthermore, it's examiner's position that a person of ordinary skill in the art would have known that the changing the configuration of the bottom wall of the container from a conical shape to a flat surface would effectively restricting the fluid flow in the container to build up liquid layer in the housing to immerse the extraction medium since flat surface is in full contact with extraction media while conical shape would not have been in full contact with extraction media to further restrict the flow.

4. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper et al as applied to claim 27 above and further in view of Markell et al. Pieper et al teach an apparatus for extracting a substance from a liquid sample as described in above paragraph. Markell et al teach an extraction media disk comprising particles having a size less than 20 microns (see col. 8, line 27 – col. 10, line 11). Incorporating particles having a size less than 20 microns in the extraction media of Piper et al would have been obvious at the time the invention was made since such particles are known to be used for extraction process as taught in Markell et al.

5. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper et al. Pieper et al teach a particulate material having a size in the range of 0.1 to about 600 micrometers, preferably in the range of 1 to 100 micrometers (see col. 4, lines 55-60). Pieper et al disclose the claimed invention except for a extraction media having a particle size of less than 20 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to discover optimal particle size of less than 20 microns since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

6. Claims 12-17, 19 and 22-24 are allowed.

7. Claims 6-8, 28 and 35-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's arguments with respect to claims 1-8, 11-17, 19, 21-25 and 27-41 have been considered but are moot in view of the new ground(s) of rejection. Applicants' arguments are addressed in above paragraphs 2-7.

Regarding applicant's argument that there is no specific suggestion or teaching in the references to combine prior art or modify Pieper, KSR forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See the recent Board decision *Ex parte Smith*, --USPQ2d--, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007) (citing *KSR*, 82 USPQ2d at 1396).

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is 571-272-1142. The examiner can normally be reached on Monday-Friday 7 a.m. - 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Kim/
Primary Examiner
Art Unit 1797

JK
11/12/07